Evaluation of the 5 Boroughs Partnership NHS Trust 'Care Home Liaison Service' Pilot Project

Final Report

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Executive summary

This report presents the findings from an evaluation of the Care Home Liaison Service (CHLS) pilot project run by the 5 Boroughs Partnership NHS Foundation Trust (5BP). The service was established in January 2013 and this report covers aspects of activity for various periods up until June 2014.

The evaluation consists of two components: a quantitative analysis of 5BP audit data examining various aspects of the new service, compared where possible with data from the preceding year; and a qualitative study of staff responses to conflict, agitation and aggression in care homes eligible for the service. Key findings from the evaluation are that:

- 1,610 referrals were received in the 13 months January 2013-January 2014 i.e. approximately 4 referrals a day
- referral rates were lower in the second six months of operation compared to the first six months
- 93% of referrals were categorised as routine and the median time from referral to contact was 8 days
- time from referral to care home contact was shorter after the CHLS became operational compared to the service provided in the previous year
- previously undiagnosed dementia was identified in 144 care home residents by the CHLS
- in-patient admissions, length of stay and occupied bed days were all significantly lower in the period when CHLS was operating compared to the previous year
- the overall pay and non-pay cost of the CHLS from set-up (October 2012) to June 2014 was £1.5M
- it is estimated that approximately £734,000 less was spent on mental health admissions during the period when CHLS was operating compared to the previous year
- a number of themes were identified in how care home staff understood and responded to conflict, agitation and aggression; these included:
    - the organisation and culture of the home
    - the normalisation of certain behaviours in the context of dementia
    - modifications of the environment to make it 'dementia friendly'
    - personal care
    - strategies for managing aggression; and
    - external sources of support.

This mixed methods evaluation has provided preliminary data on the activity and impact of the CHLS and has provided some insights into how a problem for which the CHLS provided significant support is understood and managed by care home staff. These insights could be disseminated further though submission to a relevant journal.

Contents

Introduction

This report presents the findings from an evaluation of the Care Home Liaison Service (CHLS) pilot project run by the 5 Boroughs Partnership NHS Foundation Trust (5BP). The evaluation was commissioned by the Trust in March 2013 and an interim report on emerging findings was presented in July 2013. It is a service evaluation based on an analysis of Trust audit data and stakeholder interviews with the aim of informing service development and examining one particular issue, conflict management, in depth. This is an issue for which care homes sought particular support from the CHLS and the analysis is intended to be of interest to service providers both in the 5BP patch and more widely in the UK.

Rationale for setting up the CHLS

The CHLS became operational in January 2013 as a result of a successful application by the Trust to access non-recurrent Strategic Health Authority funding for innovative services designed to address an area of significant clinical need. The issue to be addressed by the CHLS was high morbidity, mortality and unnecessary hospital admission from care homes and the desired outcomes were (1) reduced emergency admissions to the 5BP mental health inpatient wards and the three Acute Trusts on the 5BP patch and (2) reduced prescription (-70%) of anti-psychotic medication to residents with dementia.

The target population were care home residents with a mental disorder and/or living with dementia. 5BP covers a population of 153,300 older adults (2010 statistics) including over 9,500 dementia sufferers and over 13,000 patients suffering with depression. One third of the dementia sufferers are residing in a care home. The service design was intended to follow models already established in Doncaster and Birmingham which had demonstrated preliminary evidence of effectiveness. The service is now commissioned until the end of March 2015 when it will be reviewed.

More widely, improvements to mental health services for older people and, particularly, better liaison between relevant agencies (acute hospitals, care homes and mental health services), have become key priorities in developed countries around the world because of the growing proportion of the population who are aged 65 years or more. A full review of current research on this background and context was provided in the interim report. The review has been updated to include literature available in September 2014 and the updated version is available in Appendix 1 below.

The Care Home Liaison Service model

The CHLS is a dedicated specialist multidisciplinary team providing an in-reach service to all care homes across the Trust foot print. The original aims of the service were to:

- Keep residents in their current setting and reduce inappropriate hospital admissions
- Reduce re-admissions to hospital
- Reduce the length of in-patient stays
- Respond to urgent referrals within 24 hours and routine referrals within 10 working days

- Reduce inappropriate 999 calls from care homes
- Improve the quality of mental health care
- Reduce the cost of mental health care.

To achieve these aims the pilot project was devised to offer services designed to:

- Improve the quality of mental health patient care
- Develop and promote appropriate alternative pathways to hospital admission
- Provide a holistic approach to older people's mental health needs and provide comprehensive mental health assessments
- Provide specialist mental health advice and support to staff in managing their residents' needs
- Assist care home staff in selected care homes to develop their competencies and confidence in managing residents needs and care
- Review and reduce anti-psychotic medication within care homes
- Undertake medicines assessments
- Provide an enhanced advisory and supportive element to selected care homes
- Use a case management approach for individual residents referred to the project in the prevention of acute hospital admission
- Provide a crisis intervention service.

The CHLS aims to provide rapid, high quality access to specialist mental health services for care home residents through the provision of both crisis interventions for individual residents via a single point of access within each borough and enhanced input with proactive support for all homes in these areas. Individual team members are expected to assume responsibility for individual care homes to ensure rapid access, a timely response to treatment and continuity of care issues for residents, and support to care home staff. The team are also tasked with delivering training packages to care home staff on a range of topics.

When the CHLS became operational, the Trust was already commissioned to provide a core Later Life and Memory Service (LLAMS) for older people, including assessment, diagnosis, treatment, monitoring and review. This service is non-discriminatory with regard to where service users reside and, prior to the implementation of the CHLS pilot project, this service provided support to all older people including those residing in care homes. The non-discriminatory nature of the service meant that resources were limited when providing a service capable of meeting the enhanced, ever-increasing and complex needs of care home residents as identified within current national guidance and best practice.

The team has changed structure since the beginning of the service. The team is expected to accept referrals from all care homes across the boroughs providing rapid response on a case-by-case basis. This includes advising on mental health and wellbeing, pharmacological treatments and formulating non-pharmacological management strategies. To achieve a positive change in prescribing practice and care delivery, the CHLS aims to provide access to a consultant psychiatrist, nurse practitioners, a range of allied health professionals (e.g. specialist pharmacist, and occupational therapist) and administrative support.

The service configuration has changed over time. The CHLS sits within LLAMS, working alongside existing later life and memory services for community and hospital care. Throughout the period covered by this report, the CHLS accepted referrals for individual residents from any of the 174 homes across the geographical footprint of the 5 Boroughs Partnership covering approximately 7,000 care home beds. After April 2014 (almost entirely beyond the period covered by this report) the service stopped providing support to care homes in Warrington and St Helens.

In addition, the original CHLS model offered a standard intervention to all care homes in the five boroughs and an enhanced 'proactive' intervention to a selected subgroup of homes. With the new focus on Wigan, Knowsley and Halton since April 2014, the standard service has been discontinued and all general and EMI care homes receive the enhanced service.

The enhanced support element includes:

- Specialist advice on mental health through regular clinics with individual CHLS members assuming responsibility for individual homes
- Facilitating early discharge from in-patient wards
- The review of anti-psychotic medication in dementia patients, considering both stopping and alternative treatments
- Support for the introduction of best practice principles by the provision of validated training including Dementia Care and Awareness, Challenging Behaviour, Dignity, Care Planning and Clinical Supervision

Assessments of mobility and pain and the provision of suitable interventions as pain was considered to be a major contributing factor to behavioural problems in care homes.

Evaluation method

Timelines

The service became operational in January 2013 and the interim report covered activity in the period January-June 2013 (referred to below as Phase 1). This report covers new activity from July 2013-May 2014 (Phase 2) and considers both Phases together where appropriate.

Objectives

A set of objectives for the evaluation derived mainly from the CHLS Key Performance Indicators were agreed between the research team and the funders and underpinned the analysis provided here. These objectives were to examine:

1. the activity of the CHLT since its establishment in January 2013 in the following areas:
    1.1. service efficiency: urgent and routine referrals assessed within specified timescales (KPI3)
    1.2. quality of care in care homes
        1.2.1. improved diagnosis
        1.2.2. staff training (KPI 1)
2. changes in 5BP in-patient service use (KPI5) following establishment of the project compared with the equivalent period in the previous year. Specifically:
    2.1. inpatient admissions from care homes
    2.2. length of inpatient stay
    2.3. occupied bed days
    2.4. readmissions.
3. Costs associated with the above activities, including any changes in costs
4. Staff and carer experience of the service (KPI4)

As in Phase 1, some key aspects of the service could not be evaluated as data were not available within the time scale of the evaluation. In particular it has not been possible to analyse the care home 999 call rate (KPI2) or in-patient admissions to the 3 general hospitals in the 5BP catchment area (part of KPI5).

Data sources and analysis

The evaluation is based on analysis of (1) routine data collected by the Trust and passed to the research team and (2) interviews with care home staff conducted by the research team.

For Objectives 1 and 2 the following routine data were available in final versions to the research team for analysis by September 2014:

- Referrals to CHLT
- Admissions to 5BP in-patient wards from care homes
- Training events

Objective 3 was addressed through calculation of costings based on the above data conducted either by the Trust or the research team.

Objective 4 was addressed in a new way in Phase 2. In Phase 1 six face-to-face semi-structured interviews with CHLS stakeholders had been conducted to examine start-up and other service issues. In Phase 2, following discussion with the Trust, it was decided to examine in-depth one particular aspect of care home living which is salient for both residents and staff and upon which CHLS staff were often approached for advice and support: conflict, agitation and aggression.

It was anticipated that a formal research approach to this topic would provide findings which would be generalizable beyond the specific service being evaluated and thus could be relevant to other services in the UK and beyond. As such, they could form the basis for dissemination through submission to a peer-reviewed journal. Full details of the methodology adopted to examine this issue are provided in the relevant section below.

Validity issues

As stated in the Phase 1 report, the strength of the conclusions that can be drawn from this evaluation are limited by a number of unavoidable issues based on the nature of the data underpinning it and these limitations should be kept in mind when interpreting the findings. A summary of the key validity issues is provided in Appendix 2.

Results

Objective 1: CHLS activity January 2013 – January 2014

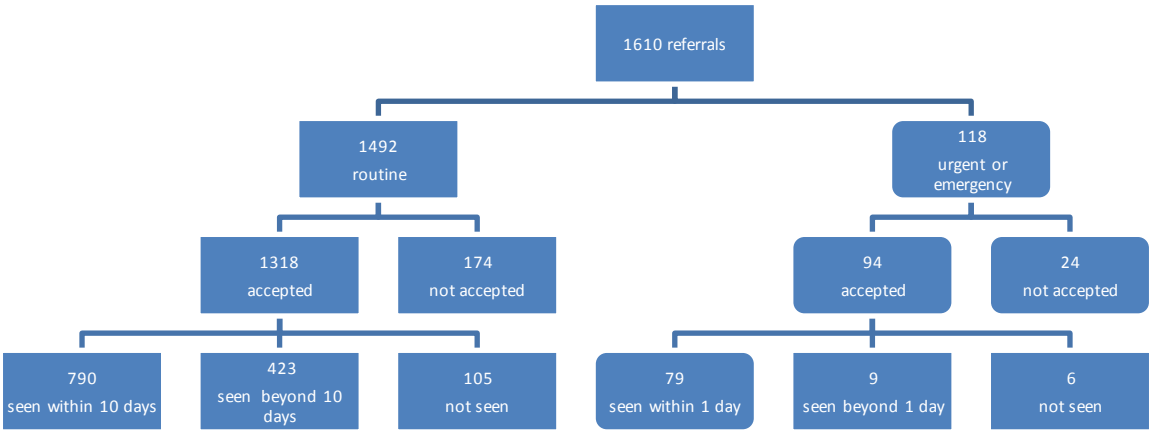
1.1 Service efficiency: referrals, assessments and active cases

In total, 1,610 referrals involving 1,395 care home residents were made to the service from inception in January 2013 to the end of January 2014. This is approximately 4 referrals per day. Five residents (0.3% of residents) were referred four times over the period, 23 (1.6%) were referred three times and 153 (11.0%) were referred twice.

Figure 1 illustrates the overall flow of referrals, acceptances and contacts. Most referrals (93%) were classified as routine by the CHLS, most of these (88%) were accepted and almost all (92%) of the accepted routine referrals were seen. More than half (60%) of the routine contacts took place within the specified time period (10 days). The median time from referral to contact was 8 days for routine referrals.

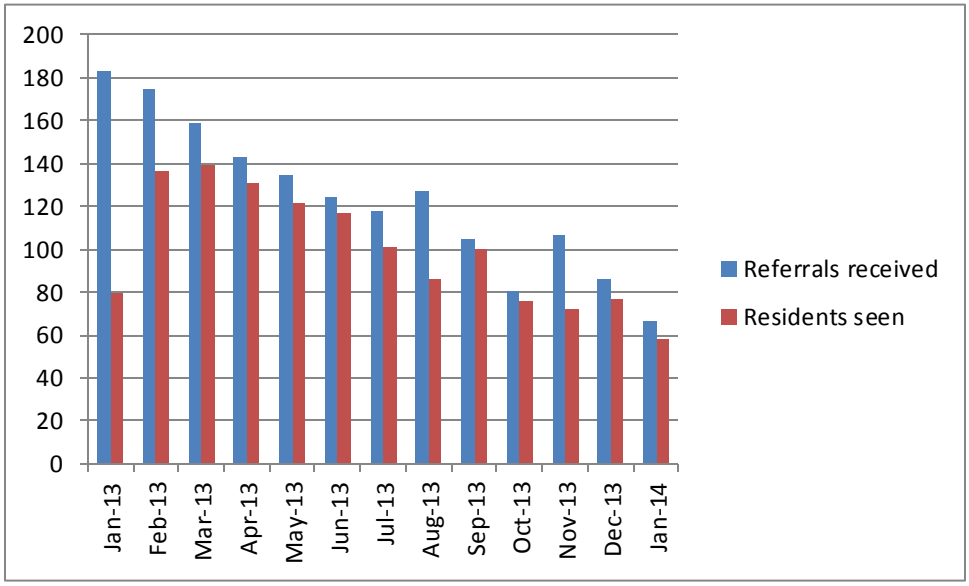
The remaining 7% of referrals were classified as urgent or (in one case) an emergency. The acceptance rate (80%) of urgent referrals was lower than for routine cases although it is not clear how many referrals rejected as urgent then became classified as routine. Almost all (94%) of the urgent referrals were seen and 84% of these contacts were within the specified time period (1 day). The six urgent referrals not seen were all made in the first month of the service. The median time from referral to contact was less than 1 day and two referrals took more than a week to make contact.

Figure 1: CHLS activity overall January 2013 to January 2014



There was a steady decline in referrals made per month from a peak in the first month of the service (January 2013) to the end of the study period (see Figure 2). The number of contacts with residents increased in the early part of 2013 but declined from April 2013 onwards.

Figure 2: CHLS activity per month 2013-14



There was agreement between the referrer and the CHLS about the urgency of the referral in 87% of cases (see Table 1). There was a strong tendency for CHLS to classify the problem as less urgent than indicated by the referrer (199 cases, 12%) but in a few cases (6, 0.3%) the CHLS felt the issue was more urgent than suggested by the care home

Table 1: referral priority according to referrer and CHLS

		Referrer priority			Total
		Routine	Urgent	Emergency	
Team priority	Routine	1294	194	4	1492
	Urgent	6	110	1	117
	Emergency	0	0	1	1
	Total	1300	304	6	1610

Data were available for the twelve months of 2012 prior to establishment of the CHLS and, assuming that there is a similarity in services offered, activity in the twelve months of 2012 and 2013 can be meaningfully compared. It can be seen in Table 2 that CHLS received fewer referrals overall than the existing service in the preceding 12 months and a smaller proportion of CHLS referrals were urgent. Acceptance rates were similar before and after implementation of the new service. The CHLS was significantly faster at seeing referrals, halving the average time to contact and significantly increasing the proportion of contacts achieved within the required time periods.

Table 2: care home liaison activity before and after establishment of CHLS

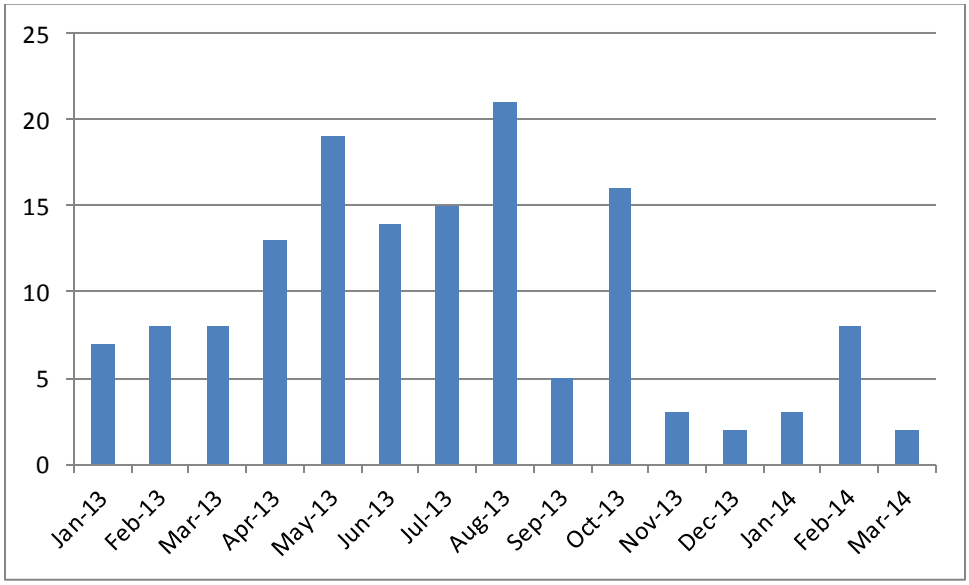
	2012	CHLS 2013[1]
Referrals received	1786	1543
Rate received per month	148.8	128.6
% categorised as urgent/emergency by team	15.2%	7.1%
% accepted	90.7%	87.7%
Average (sd) days from referral to contact	26.49 (46.22)	10.26 (19.12)
% accepted routine referrals seen in 10 days	49.0%	65.2%
% accepted urgent referrals seen in 1 day	65.1%	89.1%

1.2 Quality of care in care homes

1.2.1 Improved diagnosis

Overall, 144 'new' diagnoses of dementia were made over the period from January 2013 to March 2014. The majority of diagnoses were made in the first seven months of the CHLS operations (see Figure 3).

Figure 3: new diagnoses of dementia



1.2.2 Training for care home staff

As reported in the Interim Report, ten training packages were run by CHLS practitioners in Phase 1 (up to May 2013). In total, 107 staff attended from 10 care homes in Halton, Warrington and Wigan. The following modules were delivered in this period: Dementia Awareness (twice), Occupation and Meaningful Activity (twice), Challenging Behaviour (twice), Care Planning, Person-Centred Care, Safeguarding and Deprivation of Liberties.

[1] Excludes the 67 referrals made in January 2014 to ensure comparable time periods

More systematic data on training are available for Phase 2 (see Table 3). From May 2013 to February 2014, 78 formal training sessions for 929 staff were delivered in classroom settings of 42 venues.

Table 3: training run by CHLS staff

Topic	Number of sessions	Percent	Number of participants	Mean no. of participants per session
Activities	17	21.8	121	7.1
Challenging behaviour	16	20.5	186	11.6
Dementia awareness	15	19.2	255	17.0
Medication	10	12.8	172	17.2
Care planning	8	10.3	33	4.1
DOLS, capacity and safeguarding	6	7.7	63	10.5
Communication	2	2.6	32	16.0
Record keeping	2	2.6	12	6.0
Functional mental illness	1	1.3	16	16.0
Pain in dementia	1	1.3	39	39.0
Total	78	100	929	11.9

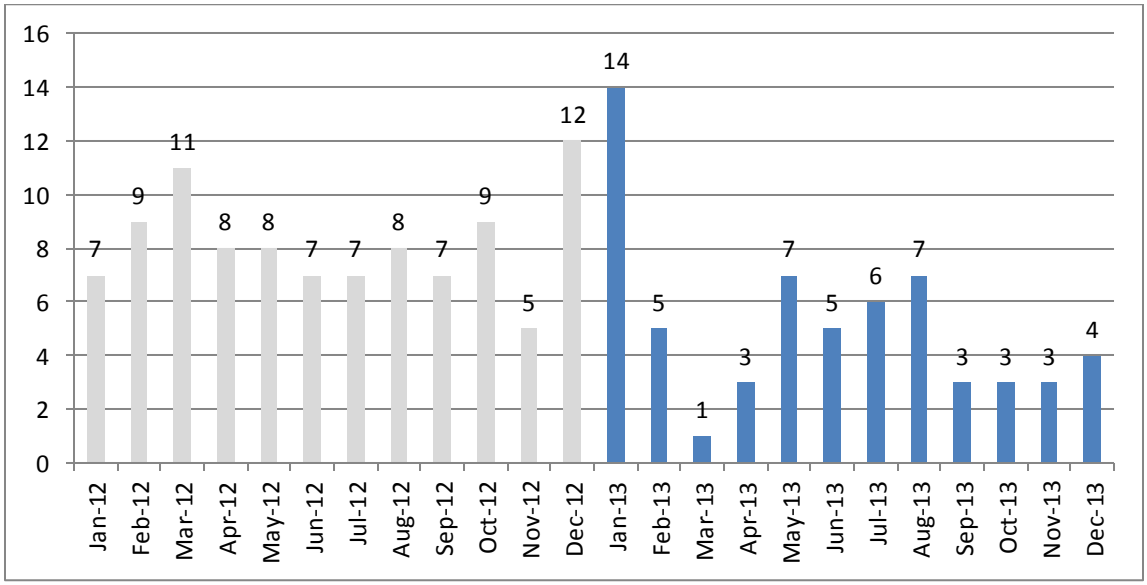
Objective 2: changes in service use following establishment of the project

There were two sources available for examining this question. There is a 'raw data' Excel spreadsheet with 227 cases and also a summary table for each aspect provided by the Trust and based on this spreadsheet. There are some minor discrepancies on 2013 data between the two sources and it is assumed that the summary table data has been cleaned in a way that means the values are more accurate. In the analysis below therefore, summary table data will be presented.

2.1 Admissions to 5BP wards

There were 98 admissions to the LLAMS wards in 2012 and 61 in 2013 (see Figure 4). This represents a 37.8% decrease following the implementation of CHLS. The average number of admissions per month was 5.08 in the CHLS period compared to 8.16 in the comparable period beforehand. This reduction is statistically significant ($p<.05$).

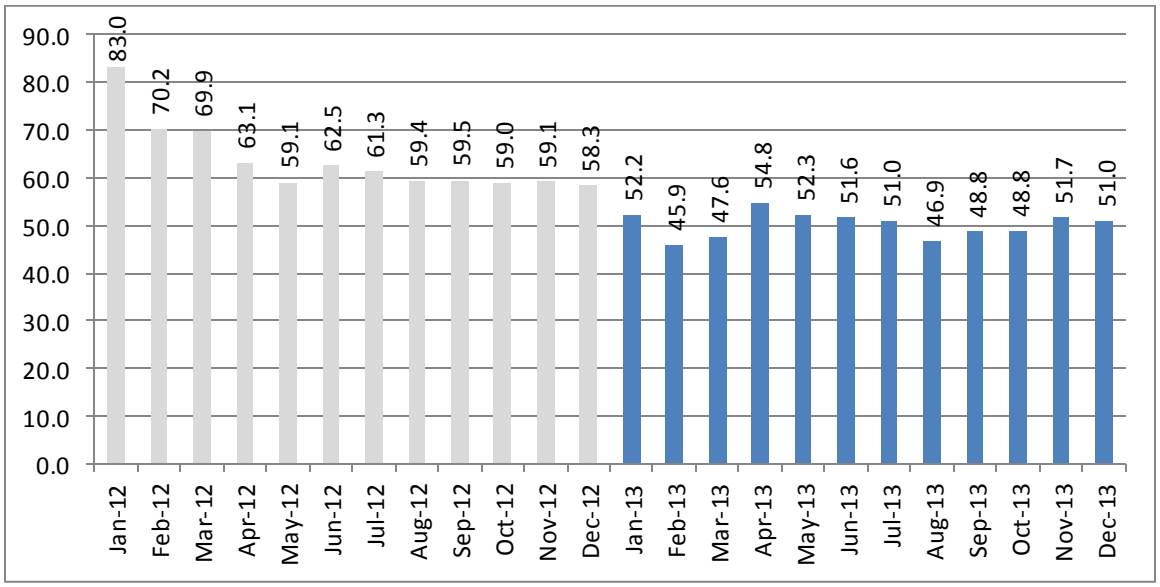
Figure 4: number of admissions to 5BP wards before and after CHLS implementation



2.2 Length of stay

The average length of stay in the CHLS period was 50.2 days compared to 63.7 days in the comparable period in the previous year (see Figure 5). This represents a 21.2% decrease in the CHLS operational period ($p<.05$).

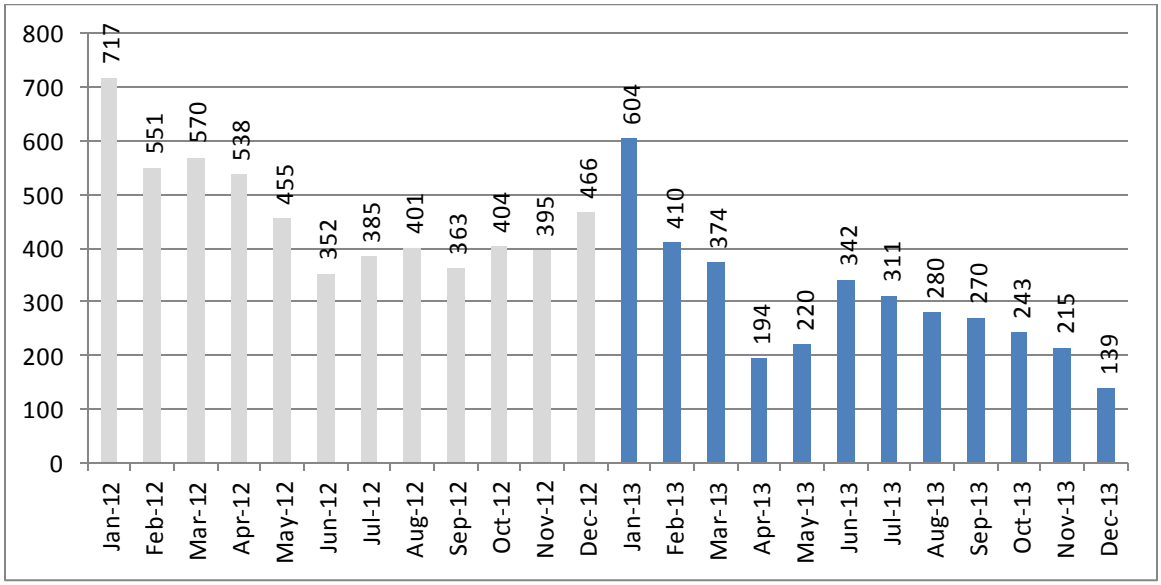
Figure 5: length of stay on inpatient wards before and after CHLS implementation



2.3 Occupied bed days

In 2013 there were 3,602 occupied bed days compared to 5,597 in 2012 (see Figure 6). This reduction of nearly 2,000 OBDS represents a 35.6% decrease and is again statistically significant ($p<.05$).

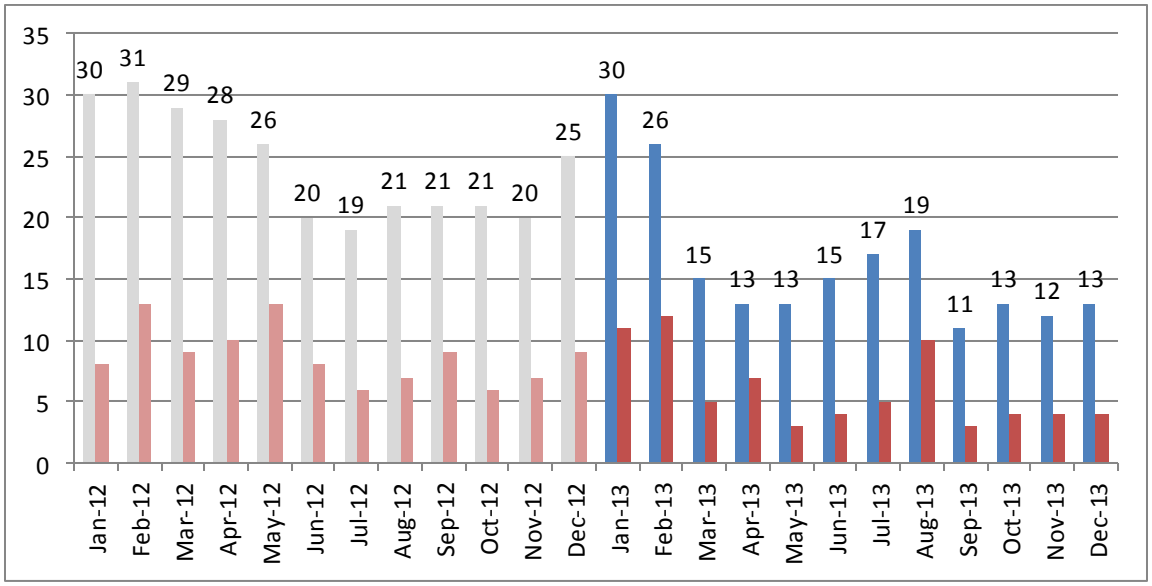
Figure 6: occupied bed days before and after CHLS implementation



2.4 Number of inpatients and discharges

The average number of in-patients per month was 16.4 in 2013 compared to 24.2 in the year before CHLS was operational (32.2% reduction) and the average number of discharges per month was 6.00 after CHLS compared to 8.75 in 2012 (31.4% reduction; see Figure 7). Both reductions were statistically significant ($p<.05$).

Figure 7: number of inpatients and discharges before and after CGHLS implementation



Objective 3: economic evaluation

Cost of the Service

The total costs to the 5BP Trust of running the CHLS are summarised in Table 4. Overall, the service has cost £1.5 million over 21 months of operation (including the set-up period). Of this expenditure, £1.2 million (82.8%) has been spent on salaries and £258,245 on non-

pay items. There are two periods that are comparable (January – June 2013 and January to June 2014). In these two periods the amount of money spent on pay halved (from £507,832 in Jan-Jun 2013 to £258,088 in Jan-Jun 2014) whilst the amount of money spent on non-pay items decreased by a factor of nine (from £180,397 in Jan-Jun 2013 to £20,016 in Jan-Jun 2014).

Table 4: CHLS service costs

	Oct-Dec 2012	Jan-Jun 2013	Jul-Dec 2013	Jan-Jun 2014	Total
	Start up	Phase 1	Phase 2		
Pay	92,265	507,832	387,267	258,088	**1,245,452**
Non-pay	13,855	180,397	43,978	20,016	**258,245**
Total	106,119	688,229	431,245	278,104	**1,503,697**

Mental Health Inpatient Bed day costs

Figures for the cost of a bed day for mental health inpatients have been taken from NHS Reference Costs 2012/13. These are national average unit costs and local costs may vary. NHS Reference Costs include three potentially relevant categories of costs (see Table 5).

Table 5: NHS reference costs

Currency Code	Currency Description	Unit Cost per occupied bed day	Cluster days in admittted patient care
MHCC19	Cluster 19: Cognitive impairment or dementia (moderate need)	£380	245,646
MHCC20	Cluster 20: Cognitive impairment or dementia (high need)	£362	423,246
MHCC21	Cluster 21: Cognitive impairment or dementia (high physical or engagement)	£364	196,189

A weighted average cost of these categories (£367.80), based on the number of days in admitted patient care, has been used in cost calculations. Estimates (displayed in Table 6 below) suggest that mental health inpatient stays cost a total of £733,761 less for 2013 than for the same period in 2012.

Table 6: estimated inpatient costs savings 2012-13

	2012	2013	Difference	Saving (£)
Jan	717	604	113	41,561
Feb	551	410	141	51,860
Mar	570	374	196	72,089
Apr	538	194	344	126,523
May	455	220	235	86,433
Jun	352	342	10	3,678
Jul	385	311	74	27,217
Aug	401	280	121	44,504
Sep	363	270	93	34,205
Oct	404	243	161	59,216
Nov	395	215	180	66,204
Dec	466	139	327	120,271
Total	**5597**	**3602**	**1995**	**733,761**

However, as argued in the Phase 1 report, it is unclear whether or not such 'savings' can be wholly attributable to the work of the CHLS. Furthermore, it is also unclear as to whether such savings will continue in the long-term. Another key issue to consider is whether reducing the number of admissions from care homes will lead to a reduction in hospital stays or whether any additional capacity will be taken up by admissions from patients who currently reside in their own homes. Furthermore, it should be recognised that even if the use of inpatient mental health facilities is reduced it may not be possible to convert this into money that can be spent elsewhere as to do so would require wards to close and staff posts to be terminated.

Cost summary

Trust figures suggest that it has cost £1.5M to run the CHLS 2012-14 and that, compared with 2012, over the whole of 2013 £734,000 less was spent on mental health admissions. It should be noted that these figures do not include many of the other savings that may be associated with the implementation of the CHLS, for example, inpatient admissions outwith the 5BP Trust, A&E attendances and GP attendances. It should also be recognised that it is not likely to be immediately possible to turn any cost 'savings' associated with reducing the utilisation of mental health inpatient beds into money that can be spent elsewhere.

Objective 4: Staff and carer experiences of the CHLS service: conflict in care homes

This objective was addressed in Phase 2 by conducting a formal qualitative research study.

Introduction

Initially this study set out to explore how the concept of conflict was understood and managed in care homes which provided residential services to people with dementia in the North West of England. It was underpinned by the literature which suggested that care of people with dementia was often associated with conflict. Conflict is reported to be a feature of life in many care homes, resulting in major costs, both financial (Herrmann et al., 2006) and psychological in the form of stress and burnout amongst professionals (Rodney, 2000; Åström et al., 2004). Conflict is a deliberately broad term which encompasses a wide range of situations and relationships which are characterised by tension between and within groups of people (residents, staff, visitors) in the care home setting. Baron (1990) identified a number of components which characterise a conflict scenario in organisations such as care homes. These components include: recognition of opposing interests between individuals and groups in a zero-sum situation; and beliefs by each side that the other will thwart (or has thwarted) its interests. Conflict from this perspective is seen as a process developing out of existing relationships between individuals or groups which reflect their past interactions and the contexts in which these took place. Finally, it implies actions by one or both sides that do end up thwarting the goals of the other. The concept of conflict therefore includes, but is by no means limited to, aggression by residents toward each other and toward staff. Aggression, however, is the most intense form of conflict and has recently been most widely reported in the literature. Studies report aggressive behaviour among care home residents, both verbal and physical (Cassie, 2012; Cipriani et al., 2011; Duxbury et al., 2013). Ballard et al. (2002) reported that up to 86% of people with dementia living in residential care settings displayed behavioural and psychological symptoms of dementia, including verbal and physical aggression (Ballard et al., 2002).

The study here formed a part of the evaluation of the CHLS. One of the most popular CHLS training modules attended by care home staff was on the management of challenging behaviour and behavioural problems. A number of studies have presented qualitative data from nurses and care home staff regarding their views about the nature of aggressive behaviour and how to respond to it. Duxbury et al. (2013) summarises these studies: e.g. Foley et al. (2003) and Rosen et al. (2008) in the US; Manderson and Schofield (2005) in New Zealand; and Isaakson et al. (2008) in Sweden, who concluded that aggressive behaviour is often ‘in the eye of the beholder’. MacDonald (2007) found that care assistants asked about their conceptualisation of aggressive behaviour by residents had a negative

view of aggressive behaviour, as they thought this was inherent to the illness, and thus they felt powerless to manage it in a positive way.

These qualitative studies reveal the complexity of the ways in which staff perceive aggression in healthcare settings and the need to examine closely the dynamic within which these symptoms occur. Many episodes of aggression occur when personal care is being offered or imposed and the aggression is more accurately seen as resistiveness to care (Cunningham and Williams, 2007).This study revisits some of these questions, but the focus of the study shifted away from conflict as senior care staff portrayed 'aggression' as both a symptom of dementia as well as a behavioural manifestation of cognitive issues arising from dementia.

Methods

This is a qualitative, semi-structured interview study using a modified grounded theory approach. A research protocol and supporting documents, including a respondent information sheet, a consent form, and an interview topic guide (see Appendix 1) were produced based on the study design. Ethical approval to conduct the study was obtained from the University of Liverpool (ref. IPHS-1314-LB-254).

Recruitment

Care homes offering dementia care were identified by the manager of the CHLS and through an online register of care homes (carehome.co.uk) that lists over 20,000 registered care homes in the UK. A purposive sampling framework was devised to ensure that respondents were recruited from as wide a range of dementia care homes as possible within the study location. Twenty care homes were selected on the basis the following variables; the provision of nursing care (yes /no), size (small, <41 beds; medium, 41-55 beds or large, >55 beds)) and type of provider (not-for profit, small private or large private). Managers and (in their absence) senior staff members were identified from each selected care home as potential respondents; it was anticipated that these staff were more likely than junior staff to have an overview of the topics under discussion.

Respondent recruitment took place between March and July 2014. Managers of the selected care homes were initially contacted by telephone and/or letter. Those who expressed an interest in taking part were sent a respondent information sheet, and re-contacted once they had had time to read it. Before being interviewed respondents were asked to give informed consent by completing two copies of the consent form, one of which they kept.

Only two of the twenty homes approached declined to participate. One respondent from each of the 18 care homes was recruited. The profile of care homes by nursing provision, size and provider is presented in Table 7.

There were 16 female and 2 male respondents; 12 of the 18 respondents were registered nurses; 12 respondents were managers, 2 were deputy managers and 4 were senior carers. Their ages ranged from 34 to 61 with a mean of 47.6. Respondents' had many years' experience of working in care homes. For details of each of the individual respondents, and the care homes in which they were working, see Appendix 3.

Table 7: interview sample profile

Care home	No. of respondents
With nursing	14
Without nursing	4
Total	**18**

Size	No. of respondents
Small (<41 beds)	6
Medium (41-55 beds)	6
Large (>55 beds)	6
Total	**18**

Care home provider	No. of respondents
Not-for-profit	5
Small private	8
Large private	5
Total	**18**

Data collection

Semi-structured interviews based on a topic guide (see Appendix 4) were conducted with respondents, to explore their understanding of conflict, and aspects of conflict management in the care home setting. Each interview took place in the care home in which the respondent worked, at a time that was most convenient for them. The interviews were audio-recorded. The interview recordings were transcribed by a university transcribing service, and checked and anonymised by the researcher. All digital data were stored securely on the password-protected university server.

Data analysis

The data were analysed using a modified grounded theory approach (Charmaz, 2014). Field notes were made following each interview. The audio-recordings of the interviews were listened to; then the transcripts were read alongside the field notes. The data were then coded line by line, interrogated and categorised. This enabled concepts to emerge which were examined in the context of other transcripts. Patterns were identified, and differences and similarities between groups were examined. Numbers attached to quotes below refer to individual respondents.

Findings

The majority, and in some cases all, of the residents in the selected care homes were diagnosed with dementia to varying degrees. Although the original focus of the research had been on the conceptualisation and management of conflict in care homes catering for residents with dementia, the findings which emerged identified a strong ethos of risk management and keeping people safe. However, this ethos of keeping people safe often resulted in practices which could arguably be deemed to infringe residents' right to liberty. The Deprivation of Liberty Safeguards (DoLS) were not well understood in these settings and there was an organisational ethos to protect residents as a group rather than as individuals reflected in the way in which the environment was structured. This report focuses on the way in which the care of people with dementia was provided and the strategies that were adopted to keep residents safe and defuse agitated and aggressive behaviours.

Organisation and culture of the home

The care homes in this study usually had a wider organisational context within which the home had developed its own cultural ethos and way of operating.

It was common for managers to recognise that '*with the best will in the world, we you know, there isn't enough of us to be everywhere at once*' (03). Staff-to-resident ratios varied considerably between care homes and units: from 1:2 to 1:7 during the day; and from 1:3 to 1:10 during the night. While all managers would have liked more staff it was recognised that keeping the staff they had was always on a knife edge. The terms and conditions of employment provided by the care homes were reported to undermine attempts to develop and retain skilled and motivated staff. All basic-grade care staff were on the minimum wage; and they usually received no sickness pay from the employer.

> *We don't get sick pay; well, it's at the manager's, well the director's discretion; it just depends; but most people understand that. I think it's the same across the board now. (13)*

> *We have a lot of sickness now amongst staff, and I think the sickness is significant because of the amount of stress and pressure and you know challenges they're under. (03)*

Most care homes operated 12-hour shifts. However, in a small number of homes 12-hour shifts were not practised as it was felt they were 'draining' on staff (10). One respondent said: '*it's a tiring job because it takes … mind-work as well as your body'* (09). Another acknowledged the importance of staff not being overworked.

> *They're not effective if they're overworked, are they? You need them, but you don't want to make that extra pressure you know because it impacts on residents. (10)*

One of the managers of a home that did not use 12-hour shifts reported that tired staff with challenged patience created a recipe for friction.

All the staff are part-time staff, because it's a stressful job, a very stressful job; and they work over a six- week rota so you know, they have good gaps off in the middle and things like that; and then it allows for them to have overtime if they want to. But I do feel it's important that you know, they don't get too overloaded with the work because they could be burnt out, absolutely burn out; and then you've got the problems then, the challenges, because they're tired they haven't enough patience, not enough patience; so then somebody might pick up on the body language of a staff member and they'd fire back then. (04)

In some of the homes managers reported an over-emphasis on rules and regulations, and paperwork which also extended to the use of 'correct' terminology and the avoidance of 'negative language'.

Our policy and procedure requires that we call that kind of response a distress reaction; so we're not allowed to call it, we're not allowed to use the word 'aggressive', not supposed to use the word 'aggressive'; we're not supposed to use negative language; so we have to be very careful and very politically correct about how we're recording it. (03)

While there was a recognition that the language used was important, aggression was one of the most common terms used about residents with dementia. While acknowledging the negative connotations associated with the word 'aggressive', respondents reported patchy attempts at training people to deal with aggressive and agitated behaviour. Staffing and training were big issues in all the homes. Some respondents talked enthusiastically about the training they had received as senior staff; but little training was reported to have been provided to basic-grade staff. Most were expected to do on-line training; often in their own time.

On a unit like this, dementia unit, where there's lots of behaviours and there's lots of interpersonal skills that are required to manage some of the situations that arise on the unit, you can't learn that from a book you know. There's got to be that kind of practical almost role- playing opportunity... (03)

Care homes reported to be under immense pressure with 'violence and aggression' avoided it by employing '*good nurses, who actually understand*' (07). However, the reality was somewhat different with those most likely to be dealing with aggressive behaviour and verbal agitation reported to be frontline care staff; the group who were reported to have the least training, the lowest pay and the worst conditions of employment.

In line with the findings of other studies 'work' was defined as paperwork and undertaking physical tasks. Sitting with the residents was seen as important but often hard to justify unless undertaken in the context of other work or in the staff breaks.

Sometimes what I'll do is I'll take my work, if I'm doing something written I'll go and take my work into the area and I'll sit, sit with that person while the staff then can go and do their work. Sometimes like a one-to-one because of the staffing

ratio we've got it doesn't always allow for staff to give that time if it's only five minutes of their time you know, because they're dealing with personal care of very frail people. (04)

There were a few examples of care homes in which the managers reported sitting with residents as an important part of the job. One respondent described how she and her team regularly sat with the residents and shared their own food with them.

We share our food with them and everything; we bring our own food in a lot and I mean we get provided with food; we do get a meal but a lot of staff bring their own in as well, and quite often we'll save what the kitchen send us, it's usually sandwiches, we'll save them; and if we're having our tea the residents will have had their tea already, but maybe 20 minutes after they've had it they've forgotten, some of them, and as soon as they see us eating something they'll come over and say 'have you got anything for me?' So at least we've got food that we can give them, and we share our food with them what we've got; and you know, we don't have any of these taboos that you know 'this is mine and you can't have it', 'we're not drinking out of the same cups or plates or anything'; we're not bothered about that. (01)

This shared activity was, however, unusual among the care homes participating in this study.

The normalisation of certain behaviours in the context of dementia

All the respondents referred to incidents and behaviours in the care home setting which were seen to be inextricably associated with dementia. Respondents talked about '*the behavioural and psychological symptoms of dementia*' (BPSD) (03) that they observed in residents, such as physical aggression, verbal aggression and agitation.

They're quite impulsive, you know. They lack the ability to make judgment for themselves; they lack any insight; they lack any thoughtfulness; they can't kind of premeditate a lot of stuff. (03)

So, because of their age and their diagnosis residents with dementia were rarely accorded insight and motivation. In recognising and understanding that, staff viewed these behaviours as residing within the individual but beyond the individual's control.

I came from an acute psychiatric admission ward where conflict in there would be tables and chairs being smashed and staff beaten up. Conflict to me is not an 85-year-old person walking past and punching me in the arm. It's subjective; it's absolutely subjective to the environment. (07)

Memory loss was portrayed as the root cause of the misunderstandings which arose on a daily basis. Being unable to recognise themselves in the mirror, and mistaking others for people they once knew, was reported to raise the possibility of agitation and aggression. Aggression and agitation in residents were seen as a normal component of dementia. One respondent said: '*verbal aggression is a daily occurrence'* (12); another said: '*I think all the staff are aware that there's potential for aggression from anybody really that we're looking*

after' (18); and a further respondent described the destructive behaviour of a resident as '*part of her dementia'* (15).

Although violence and aggression were viewed as an integral feature of dementia, respondents recognised that many factors could trigger or exacerbate these behaviours; these included the physical space within which residents lived.

Physical space

The physical environment in many of the care homes was reported to provide both the potential to trigger aggressive behaviour as well as to offer solutions for its modification. One respondent in a medium-sized private care home said: '*we're working with antiquated buildings that are no longer really fit for purpose*' (03). There was recognition that residents were often sharing a confined space, for instance a living room or lounge. One respondent said: '*on the general nursing unit and the dementia unit we need more space'*, and she said of the care home: '*I just don't think it's very dementia* friendly' (12). Another respondent was concerned about the layout of the dementia unit within the care home that she managed and how it contributed to tension among residents.

> *It was built a few years ago, before I was ever here, with these 25 bedrooms that are virtually identical on two corridors in a T-shape, quite institutionalised-looking, not the best and cosiest of environments ... it was just literally rooms added on to a building to make money, to get people to come in, without thinking people are going to need space. There are times when everybody, because everybody wants to be where it's at, where the music's on and where all the staff are but that can get very crowded, and when it gets crowded, it gets tense. (08)*

The dining area was another area that was reported to be overcrowded, with a lot of activity at certain times of the day. As a communal space it was often the location in which residents with dementia interacted with each other.

> *Tea time is absolutely chaotic; it's chaotic, it's mealtimes yeah, and that's the time where there's lots of this conflict and there's lots of, 'cause there's lots of activity going on; and that's why it provides a lot of stimulation - and not always positive stimulation - for people. (03)*

The lack of space meant that when residents became distressed they frequently triggered a response in the other residents who often also became agitated. One respondent described such a situation which happened regularly on the unit she managed.

> *We've got one gentleman who does like attention. He wants you to sit and hold his hand and rub his back and 'be next to me, my darling' and 'hold my hand, my darling'; and he can shout and be really loud. He used to be a prison officer so he's got a really deep, loud, loud voice, and he'll start shouting and shouting. Now when he starts shouting the other ladies, some of the other ladies will start shouting to him to 'shut up, shut up'; and he shouts louder and they'll shout louder to him to shut up. (01)*

One respondent working in a small private care home observed that the mobility equipment that many residents needed took up a lot of space, adding to the congestion in confined spaces.

> *We haven't got enough, enough space really you know for people to do what they want to do ... the lounge is now, because people need more specialist equipment you know which is big and bulky, and hoists and ... the home doesn't lend itself to that so you know, if we had more lounge space we could split people up and we could do a lot more. (13)*

Managers provided many examples of residents taking other residents' property. Interestingly, this was usually reported as resulting from a resident's confusion rather than because a lot of the equipment that was used looked identical. One respondent described a resident 'pushing people out the way and dragging Zimmers off people' (15); and another described how an impulsive act, such as appropriating another's Zimmer frame, often escalated into verbal aggression and sometimes physical violence.

> *We've got a number of Zimmer frames on the unit. It might just be that X's got her Zimmer frame and Y walks in and thinks 'oh, I'll have that Zimmer frame' and 'there's my Zimmer frame', and then there's you know there's a verbal exchange. It's quite hostile with threats of violence in there, and that sometimes leads to actual violence. (03)*

In confined spaces, it was reported that the Zimmer frame became a weapon.

> *We've had one of our residents pushing a Zimmer into another resident to move them out the way ... she just rammed it into the person who was in her way. (03)*

The confined spaces within which residents circulated could rapidly become under-stimulating or over-stimulating depending on the dynamic of the individuals in the space. Managing this dynamic also involved sometimes adjusting the volume of the various pieces of audio-visual equipment which were omnipresent in these homes and designed to create a homely atmosphere.

> *We're meant to have music on all the time for the residents: a nice homely environment and you know an environment that would be appropriate for them; so we'll have the telly on, we'll have music in the background; it's just too much noise. (03)*

In the majority of care homes residents had limited access to outdoor space, such as the gardens and the majority of the resident's time was spent in the home.

Modifications of the environment to make it 'dementia friendly'

A few respondents reported attempts at re-designing the environment to make it more 'dementia friendly'.

> *We've had all our lights changed before Christmas. They were a lot dimmer. So we've had bright lights put in, we've had our corridors changed: we've gone to a*

brighter yellow because it was like a dull pinky peach, so we've had the corridors done lighter ... The lounge, we've had two extra lights so it's brighter come evening time. (15)

Another respondent, who worked in a purpose-built dementia care home, described how the layout prevented unintended contact in order to reduce altercations between residents.

The corridors are that wide so at least when people are walking, when the clients are walking that means ... they're not meeting in the middle, rubbing shoulders. (09)

Keeping residents safe was a major focus of dementia care in the care homes in this study. Strategies involved re-engineering the space, for instance through the use of frosted glass in windows and disguising doors as walls with paint.

What we understand now in terms of EMI environments and dementia environments is to disguise the doors so that they don't recognise it's a door, because if they see a door then they are obviously going to try and get out. So we try to disguise what the doors look like, and even - and this is sad - even a lot of the windows are frosted to stop them from looking out because that causes them distress. (03)

Other methods of re-engineering the space included locating some residents with a propensity to 'wander' (05) on an upper floor with restricted access to a lower floor to prevent them from 'absconding', and the ubiquitous use of locked doors.

In the name of safety, a sanitised reality was constructed in which artificial flowers replaced real flowers (01); 'bus stops' were created as waiting points for buses home that never arrived; and 'post boxes' positioned as repositories for letters that never reached any destination.

I personally don't like the bus stops. I think you need a purpose; you need to go somewhere, whereas if you've got like a post box you can give them an envelope and say 'can you go to the post box and post the letter for me', and they'll just go and post the letter and come back. But a bus stop they usually are waiting for a bus to turn up so and it never comes and that's a bit mean. (13)

At lunch times when everyone was in the communal areas, we took her to the launderette down here, wrote a care plan, and she folded towels; she loved it. She was the best towel folder I've ever met ... She enjoyed herself; it gave her purpose, it de-escalated, defused. (07)

These modifications were designed to create an alternative safe world where outside factors likely to provoke a negative response in the dementia patient were removed. Interestingly, one respondent reported that for residents with dementia '*being in their reality lessens the stress for them*' (10).

There were, however, examples of homes which tried to remove sources of confusion by other means; for instance, by personalising the doors of residents' rooms to ensure that the usual uniform doors and corridors did not confuse residents further.

Individuality

While there was a general view that dementia subsumed the individual's personality, the individual's past life was deemed to be important in making sense of their current behaviours. This commonly boiled down to the attribution of certain traits to the resident's former self.

> *We've got a gentleman that runs a lot and he's in his late 70s, but his daughter said before he got dementia he would do ten miles a day walking and running; and sometimes it's dangerous because you think oh my God, if he bumps into somebody and knocks them flying, or he trips and falls; but at the end of the day you've got to have them minimalised risks. Running in the corridors sometimes, and we'll say to him 'be careful' and he'll say 'I'm keeping fit'. (15)*

> *She used to be a social worker and she thinks that the other residents here are the children that she looks after, and she's convinced that this is her place of work and that she's at work. So she'll go into people's rooms of a night and say things like 'no, you can't have a dummy' and 'I've already given you a blanket' and 'your mum will be here soon' kind of thing to these people who are already pensioners; but she gets very annoyed if they don't do what she says ... she'll tend to drag people 'come along with me' kind of thing. She thinks that you know people have these little rollator trolleys and these little wheelie things, she thinks they're scooters or prams so she takes them off people and they fall over, 'cause she thinks they've got to go in the shed now, they've got to go in the garage. (08)*

While acknowledging that residents with dementia had had different personalities and characteristics, the cognitive impairment associated with dementia had become the lens through which the resident's old self was filtered. Respondents reported being uncertain about how to interpret residents' views on how they felt or things that had happened. In one case a home manager reported that although a resident was prescribed antidepressants she did not know whether he was actually depressed (01). Dementia textured the person's whole being, rendering them unfathomable to many home managers.

Personal care

Personal care was the arena in which most respondents reported difficulties. One respondent said of a resident who refused to be washed: '*he feels that he's being, he's going to be hurt; he's going to be injured*' (03). Some respondents emphasised the importance of recording and monitoring residents' behaviour in an attempt to identify patterns and so potentially predict and prevent aggressive and agitated behaviour. One respondent described techniques that helped her and her team to encourage residents to accept personal care from staff.

We look at strategies to be able to go in… when's the best time of the day, whether they're receptive to certain staff, whether it's, whether they're verbally abusive or physically abusive during that time ... if you necessarily didn't want to get changed but would hold my hands and I could engage in a conversation and the other person could talk them through what you're doing, so 'I'm going to change your top' or 'we're going to do this', but you're holding my hands and I've got constant eye contact with you so that you're totally reassured and in focus with that one person … rather than one person trying to give emotional support at the same time as physical; so that's really how we've gone about that. (17)

Strategies for managing aggression

In situations where residents were resisting care, respondents reported adopting different strategies to get a task done. These included backing off, trying again later and getting different members of staff involved. Giving an example of a resident who had spilled food on his jumper and refused to take it off, one respondent advised: *'leave them; come back half an hour later; don't pester them about it*' (10).

As long as nobody's in danger just walk away from it; two minutes down the line you could go back and have a different reaction completely. (04)

Distraction was also identified as an effective strategy to diffuse or quell aggression and agitation. While the goals of staff regarding delivering personal care were reported frequently to be abandoned, respondents rarely tolerated disruption which impacted upon other residents. Particular residents who upset other residents were reported by managers to be routinely put to bed in the afternoon (03) to avoid an escalation of agitation in other residents. Respondents talked about the value of time out for residents who were becoming distressed, although it often appeared that there were multiple beneficiaries to this strategy. One said: '*if we see anyone becoming distressed it's as simple as going over and saying 'would you like us to go unlock your room for you?*'' (07) Another said: '*some people just want their own private little space*' and she suggested that in such situations staff could '*offer them some time out*' (04).

One manager of a medium-sized private care home described keeping certain residents apart in order to prevent escalation of negative behaviour.

You can identify quite quickly anybody who's going to sort of have a personality clash with somebody else; or if that person's got a behaviour that will trigger a negative behaviour in somebody else then we would keep them apart. We'd deliberately not put them together. (16)

Numerous examples were provided of residents whose behaviour had become so disruptive that either they had been forced to move care homes or they were about to be moved.

External sources of support to care homes

There was significant reliance on outside help, particularly among care homes without nursing. When strategies for dealing with aggressive and agitated behaviour failed, and

when it was deemed necessary, outside help was often sought. The first port of call tended to be the GP. In addition, district nurses, community psychiatric nurses, psychiatrists and others, including the CHLS, were contacted.

Although only a few respondents talked about the CHLS they all reported very good experiences of the service. One respondent expressed concern that this 'vital' service was no longer available to her care home. She said:

> *Unfortunately the best thing, the best thing we had going for us was the Care Home Liaison because they knew the residents, and they'd come out at a crisis immediately. So I'd, we had a lady who used to come out here called [CHLS nurse] who had patients here on her books, and we've lost her, we've lost [CHLS nurse]. It's gone, it's finished. … so now we've lost the link of a face-to-face person like [CHLS nurse]. So she would have come here and been our link between here and whether it was [hospital 1] or whether it was [hospital 2] or whatever, and it's gone. So now we have to refer people through a GP; they have to have a visit. We don't necessarily just get a registered mental health nurse to come out or CPN. Yes, it's a vital service lost. (08)*

Summary of findings and study limitations

Although managers talked about the appropriate rhetoric to use in relation to residents with dementia, in the interviews they defaulted to the language of aggression and agitation. However, while this behaviour was viewed as difficult and frustrating it was always talked about in the context of people with an illness with no intent to harm. Managers were able to identify triggers to residents' aggressive and agitated behaviour but often felt unable to prevent it because of competing demands on their time. The consequences of failing to prevent these behaviours usually involved time being spent defusing situations and moving the resident with dementia. Some of the strategies employed by care homes to manage residents with dementia were designed to keep them safe but keeping people with dementia safe often came with a cost ultimately. The study raises questions about those costs particularly in relation to the resident's right to dignity and autonomy.

These findings must be interpreted in the context of certain study limitations. In particular all respondents were senior staff and predominantly managers, which meant that they had an overview of the issues. However, this also meant that they tended to spend less time with the residents than the staff they managed, and therefore had less day-to-day, direct experience of aggressive and agitated behaviour within the care home. The study has not explored the perspective of frontline care staff who are likely to have a different perspective on the day-to-day care of people with dementia.

Conclusion and ideas for future research

This qualitative study has explored conflict and aggressive and agitated behaviour situations involving care home residents with dementia from the perspective of senior staff and managers responsible for residents' overall care. The findings provide a lens through which to view life in care homes and shows how to varying degrees aggressive and agitated

behaviour is an aspect of care-home living. The findings have helped to contextualise aggressive and agitated behaviour, and to demonstrate how staff attempted to deal with such behaviour in what were often very difficult circumstances.

The study has highlighted some future directions for research on the care of people with dementia residing in care homes. It raises many issues surrounding the way in which the needs of one resident are balanced against others, the way in which risk is constructed in this environment and the consequences of being risk averse. It would also be interesting to understand the perspectives of family members who visit the resident with dementia and how they weigh the importance of safety against other aspects of care.

Overall evaluation conclusions

The evaluation has demonstrated some promising changes in service activity and quality following establishment of the CHLS and has explored some of the complexities underlying how staff view and respond to one of the main challenges they face in providing a care home service.

The promising changes include evidence of reduced demand on in-patient services since establishment of the CHLS which was one of its core objectives. There is also some evidence that response times have improved enabling more rapid support to be provided to care homes. Lower levels of referrals after the first six months of operation and the low number of repeat referrals could also indicate successful early resolution of what before may have been more chronic problems. There may be other explanations for this trend as well though. Whether the benefits of the service ultimately justify the costs is a complex question which cannot be conclusively answered by this evaluation as it requires additional data from a wide range of linked services.

The qualitative data suggest the challenges faced by home care staff in providing a service to people with dementia are complex. For those homes receiving the CHLS there was a recognition of its value in supporting care. However, the qualitative data raised questions about how care homes balance the individual's autonomy and dignity with the need to keep people safe within the context of dementia. This delicate balance often gets overlooked. Admission to hospital and the prescribing of medication provide very tangible indicators of treatment but they do not provide the whole story about the quality of care that is provided. As the population of older people with a dementia diagnosis increases there is a clear need for a more public debate about how we support staff and what care for people with dementia should look like.

Appendices

Appendix 1: review of relevant research

Updated from the interim report, September 2014

The mental health needs of older people living in care homes in the UK

The UK, like most Western countries, has an expanding population of older people, and current projections are for further increases in life expectancy. While one in six of the UK population is currently aged 65 and over (approximately 10 million), by 2050 the rate will be one in four (approximately 19 million). Similarly, the number of people aged over 80 is estimated to rise from 3 million to nearly 8 million within this timeframe (Cracknell, 2010). Four per cent of older people in the UK live in a care home or long-stay hospital, rising to 21% of those aged at least 85 (Office of Fair Trading, 2005). The average care home resident is in their mid-80s or older, and around 75% are women. The average length of stay in care homes also differs by gender: 1-2 years for men and 2-3 years for women (Office of Fair Trading, 2005). Given the rapid rise in the older age population, the demand for long-term care beds is estimated to rise from 450,000 to 1.1 million in the first half of this century (Wittenberg et al., 2004).

There are approximately 17,500 registered care homes in the UK, with over 460,000 registered places in England (Care Quality Commission, 2013). In 2010, the ownership of care homes in England was described as 73% independent, 14% voluntary sector, 11% local council and 1% each for NHS and 'other' (Care Quality Commission, 2010). The term 'care home' includes establishments providing accommodation with nursing care (formerly called 'nursing homes') or accommodation and personal care only/without nursing (previously called 'residential homes'). There is a 24-hour presence of registered nurses in care homes with nursing; in care homes without nursing there is a 24-hour presence of staff but not necessarily registered nurses. Each of the two types can also provide various specialisms/services, one of which could be dementia care. Some care homes are 'dual' registered homes (in which both 'nursing' and 'non-nursing' residents reside). Care homes must be registered as 'service providers' with the Care Quality Commission (CQC) which is responsible for the inspection and registration of care home services.

The future demand for long-term care depends not only on the aging of the population, but also on the prevalence and severity of chronic conditions associated with ageing and admission to care homes. Residents of care homes have complex healthcare needs and significant disability and frailty. A high proportion show neuropsychiatric morbidity. For example studies indicate that dementia is present in up to 74% of residents, depression in 45% and challenging behaviour in 12% (Mann, Graham, and Ashby, 1984; Jagger and Lindesay, 1997; Godlove et al., 2000; Macdonald et al., 2002). Cognitive impairment and related behavioural symptoms are also common precipitants for care home admission (Harris, 2007), and are associated with other psychiatric disorders such as schizophrenia and bipolar disorder (Green, 2006). However, dementia and behavioural symptoms associated with dementia are the most common psychiatric disorders in care homes (Seitz, Purandare & Conn, 2010). A survey of 657 care homes in England (CSCI, 2009) found that

40% of residents had special needs as a result of dementia, and over 84% of surveyed homes had at least one resident with dementia. It is estimated that in England, around 208,000 people with dementia live in care homes, with 91,000 of those in dedicated dementia care beds (National Audit Office, 2010). Additionally, a high proportion of care home residents (30-40%) are at risk of malnutrition, and the majority of these residents are at high risk (BAPEN, 2010).

Antipsychotic medication in care homes

Many people living in care home are, unsurprisingly, on multiple medications. Studies into the use of medicines in care homes (Department of Health, 2009) found that care home residents were prescribed an average of 7.2 medicines each and seven out of ten residents were exposed to at least one medication error, although most of these were likely not to be harmful. Inappropriate prescribing is estimated to occur in 50-90% of residents.

Given the high prevalence of psychiatric disorders, old people living in long-term care are also high users of psychotropic medication, despite safety concerns associated with the use of antipsychotics having been identified as a major cause for concern in older adults with dementia (Gill et al., 2004; 2005; Cornege-Blokland et al., 2012). People with dementia as a whole are at higher risk of potentially serious adverse effects from antipsychotic medication (Black and Almeida, 2004; Schneider, Dagerman, and Insel, 2005; Lopez et al., 2013). It appears that antipsychotic drugs for people with dementia are often initiated too freely, are not reviewed appropriately and are too often used as a first-line response to behavioural difficulty in dementia rather than as a considered second-line treatment when other non-pharmacological approaches have failed (Banerjee, 2009). This is not in line with NICE guidelines recommending that the first line of treatment for behavioural and psychological symptoms among those with dementia should be psychosocial interventions (NICE, 2006) or with research evidence suggesting that behavioural interventions are a more efficient use of public money than antipsychotic drugs (Matrix Evidence, 2011). The high level of use of antipsychotic medication for people with dementia within care home settings (Child et al., 2012) is a major concern which needs to be addressed (Banerjee, 2009).

The effectiveness of mental health services for care home residents

The services managing the complex psychiatric needs of many care home residents have been criticised for not delivering adequate care. In the UK, the shift from a system largely run by local authority social services departments to one largely run by the private sector has not been planned for, either through commissioning services or through workforce development. Current input to care homes from older people's mental health services is generally on an ad-hoc or reactive basis, with referrals mainly at times of crisis (Alzheimer's Society, 2007). Evidence suggests that service provision to meet mental health needs of care home residents is inadequate (Reichman et al., 1998; Moak, Borson, & Jackson, 2000; Purandare et al., 2004; Banerjee, 2009). Previous studies have indicated issues in terms of management of challenging behaviour (Proctor et al., 1999), over-prescription of sedative medication and antipsychotic drugs (Furniss, Craig, and Burns, 1998; Koopmans, 2007;

Rochon et al., 2007; Somers et al., 2010; Stevenson et al., 2010; Cornegé-Blokland et al., 2012), and poor quality of life (Godlove et al., 2000).

A study investigating access to care homes in England (Jacobs et al., 2001; Jacobs and Rummery, 2002) found that 10% of homes had no old-age psychiatrist (OAP) available to visit when required, while 11-12% were allowed to make direct referrals (which were thought to be associated with a perception of a better service by care homes). Findings from a national survey of managers of care homes in the UK (Purandare et al., 2004) indicate that 41% of managers felt that at least half of their residents needed psychiatric evaluation; 38% reported that their homes received no visits from psychiatrists; only half described the current frequency of visits as adequate; and 80% wanted more input for staff education and training. Perceived need, frequency of visits by OAPs, availability of a geriatrician, amount of non-pharmacological advice and direct referral access to OAPs for known patients were found to be independent predictors of perceived adequacy of service provision by psychiatrists in this national UK survey.

Previous research indicates that commissioning mental health related inputs and psychiatric liaison services for care homes can have benefits for both patients and the health service. In the United States, Rovner et al. (1996) showed that a well resourced proactive psychiatric liaison service in community nursing homes was effective in reducing the number of residents with behaviour disorders and the need for antipsychotic medication. In the UK, Ballard et al. (2002) evaluated a novel psychiatric liaison service in nursing and residential care homes in Newcastle-upon-Tyne which was delivered by a full time psychiatric nurse, with additional input from a consultant old age psychiatrist and a clinical psychologist. Results indicated that there was a significant reduction in neuroleptic usage in the facilities receiving the liaison service; a reduction in the number of GP contacts; and a three-fold reduction in psychiatric in-patient bed usage for residents in these facilities. A comprehensive literature review of models of mental health services in nursing homes (Bartels, Moak, & Dums, 2002) pointed out that the evidence in this area was limited at the time of the review, mainly because of the lack of experimental controlled studies. However, results from the included uncontrolled observational studies indicated that mental health services in nursing homes may be associated with improvement in symptoms and functioning among residents; lower rates of hospitalization; lower use of emergency services; and lower mortality rates among nursing home residents with specific psychiatric diagnoses.

More recently, emerging evidence from across the UK indicates that targeted mental health services in care homes can improve the quality of care, reduce hospital admissions and save money. Early findings from a locally enhanced service (LES) evaluation of a PCT pilot scheme in Sheffield (British Geriatrics Society, 2011) indicated that a year after the introduction of the scheme there was a 6% reduction in emergency admissions compared with the previous year (saving approximately £145,000 for a year for the 500 care home beds included in the small-scale pilot). The study also identified a 3% reduction in A&E attendances and a reduction by a third in the use of emergency care practitioners following 999 calls. Another pilot scheme in Leicester trialled shared management of patients in

residential homes between GP practices and community geriatricians, offering GP practices access to comprehensive geriatric assessments, care planning, rapid written feedback and a telephone advisory service (British Geriatrics Society, 2011). Results suggest that, six months following the introduction of the pilot, there was a 16% reduction in out-of-hours consultations, a 37% decrease in requests for visits, and over 50% reduction in hospital admissions, with the total cost of hospital admissions falling by 60%.

A review of another locally enhanced service (LES) in a London borough (Briggs and Bright, 2011) found similar benefits, indicating that the service helped save money, and improved continuity of care and good working relationships. Also, a care home focused scheme in Peterborough PCT conducting nutritional screening showed a 31% reduction in the number of hospital admissions (a 27% reduction in emergency admissions) and a significant reduction (58%) in the length of hospital stays (Cawood et al., 2009). Similarly, a study evaluating a joint NHS and local authority initiative in Bath and North East Somerset, providing a dedicated nursing and physiotherapy team to three residential care homes (including training care home staff in basic nursing), showed a reduction in hospital admissions and prevention of nursing home transfers (Joseph Rowntree Foundation, 2008).

The Government's response

Raising the quality of care for people with dementia and their carers is a key priority for the British coalition government. A National Dementia Strategy (Department of Health, 2009) was published in February 2009, aiming to achieve better awareness of dementia, early diagnosis and high quality treatment. The strategy was followed by the publication of a report addressing the over-prescription of antipsychotic medication for people with dementia (Banerjee, 2009) and the implementation of the recommendations contained within that report is an integral part of improving the care and experience of people with dementia and their carers. In light of these reports, the revised implementation plan, 'Quality outcomes for people with dementia: Building on the work of the National Dementia Strategy' (Department of Health, 2010) highlighted four priority areas for the Department of Health to support local delivery of the Strategy:

(1) good quality early diagnosis and intervention for all[2];

(2) improved quality of care in general hospitals[3];

(3) living well with dementia in care homes[4]; and

(4) reduced use of antipsychotic medication[5].

These areas focus on those activities more likely to deliver sustainable outcomes with an impact at local level to the lives of people with dementia and their carers. Covering each of

[2]Two thirds of people with dementia never receive a diagnosis; the UK is in the bottom third of countries in Europe for diagnosis and treatment of people with dementia; only a third of GPs feel they have adequate training in diagnosis of dementia.
[3]40% of people in hospital have dementia; the excess cost is estimated to be £6m per annum in the average general hospital; co-morbidity with general medical conditions is high, people with dementia stay longer in hospital.
[4]Two thirds of people in care homes have dementia; dependency is increasing; over half are poorly occupied; behavioral disturbances are highly prevalent and are often treated with antipsychotic drugs.
[5]There are an estimated 180,000 people with dementia on antipsychotic drugs. In only about one third of these cases are the drugs having a beneficial effect, and there are 1,800 excess deaths per year as a result of their prescription.

the four priorities, the improvement of community personal support services enables early intervention; prevents premature admission to care homes and impacts on inappropriate admission to hospital and length of stay (Department of Health, 2010: 10). The latest updates covered in the 'Prime Minister's challenge on dementia' paper (Department of Health, 2012) highlight that there is progress on improving dementia care in the UK, although more needs to be done to fully achieve the set objectives.

Staff training

Training for care home staff is also a priority (APPG, 2008; Department of Health, 2009). However, as a national framework for the training of staff caring for people with dementia in long-term care has not been developed yet (National Audit Office 2010), there is still wide variability in the availability, accessibility, and quality of education/training in dementia care (Aylward et al., 2003; McCabe et al., 2007).

Research suggests that targeted educational interventions may produce positive outcomes. In their review of models of mental health services in nursing homes, Bartels, Moak, & Dums (2002) indicated that some of the most promising models of mental health services in nursing homes have focused on improving the behavioural management skills and treatment behaviours of the nursing home staff though training and discipline-specific interventions. They found that educational interventions were successful in changing clinicians' treatment and prescribing practice in nursing homes, which resulted in lower staff turnover, improved knowledge and performance by nursing home staff and a decrease in the use of antipsychotic and other psychotropic medication. Other studies have mirrored these results, indicating that staff training and education could be successful in building knowledge and improving job skills for all levels and types of staff (Chartock et al., 1988) and substantially reducing the number of residents receiving antipsychotic medication (Monette et al., 2008), but also in managing difficult behaviours in the short term (Moniz-Cook et al., 1998).

However, Nolan et al. (2006) argue that educational initiatives in care homes need to be embedded within the organisational culture, and providing information to staff alone is not sufficient in promoting a change in practice. A recent study (Wilson et al., 2013) that developed and evaluated a training programme in care homes based on the principles of relationship-centred care expressed through the Senses Framework (Nolan et al., 2006) found that, following the training, staff developed a greater understanding of the person with dementia. In particular, staff felt more able to collect and use biographical information which would support them to initiate meaningful conversations with the person with dementia as part of everyday care routines, thus improving overall feelings of well-being.

Appendix 2: Validity issues

With regard to measurement validity, the quantitative data is entirely audit-based. Therefore it has been collected by the Trust and passed to the research team in various formats. Much of the raw data will have been collected and/or subjected to preliminary analysis by the Trust in relation to various performance targets which may not be relevant to this evaluation. This lack of independence is widely recognised as a limitation in evaluations of this nature.

With regard to research design (internal) validity, it is not possible to draw strong causal conclusions from any comparisons made below. Objectives 2 and 3 in particular set out to compare, where possible, outcomes following implementation of the CHLT with those in a comparable period 12 months beforehand. This single group pre-post design has no external control group (randomised or non-randomised) and so any changes observed between the two time points may be due to any number of uncontrolled factors other than the implementation of the CHLT. Some of these potential factors can be hypothesised but others will remain unidentified. Therefore any observed changes in outcomes below are merely suggestive of a potential impact and any conclusions can only be tentative at this stage.

In addition, it was recognised early on that the difficulties noted above in sourcing data from other health organisations including the other hospital Trusts and North West Ambulance Service NHS Trust means that the evaluation is unable to determine the impact of the pilot project on the wider health economy at this stage.

In particular, estimates of cost savings should be viewed with extreme caution. This is due to the fact that they are based on data that has many limitations and that they have been calculated using national (rather than local) cost estimates. Attempts should not be made to extrapolate the short-term cost estimates into potential long-term savings.

Appendix 3: interview study respondents

ID	Gender	Age	Registered nurse	Type of nurse	Manager (or deputy manager)	Type of care home	Size of care home	Type of care home provider
01	Female	55	Yes	RGN	Yes	With nursing	Small	Large private
02	Female	45	No	N/A	No	Without nursing	Medium	Large private
03	Female	48	Yes	RGN/RMN	Yes	With nursing	Medium	Large private
04	Female	54	No	N/A	Yes	Without nursing	Small	Not-for-profit
05	Female	56	Yes	RGN	Yes	With nursing	Large	Small private
06	Female	38	Yes	RNA	No	With nursing	Large	Not-for-profit
07	Male	45	Yes	RMN	Yes	With nursing	Medium	Small private
08	Female	52	Yes	RGN	Yes	With nursing	Large	Small private
09	Female	46	Yes	RGN	No	With nursing	Large	Small private
10	Female	41	No	N/A	Yes	Without nursing	Small	Not-for-profit
11	Female	55	Yes	RMN	Yes	With nursing	Medium	Large private
12	Female	61	Yes	RMN	Yes	With nursing	Large	Small private
13	Female	48	Yes	RGN	Yes	With nursing	Small	Small private
14	Female	45	No	N/A	Yes	Without nursing	Small	Not-for-profit
15	Female	56	No	N/A	Yes	With nursing	Small	Small private
16	Female	43	Yes	RGN	Yes	With nursing	Medium	Large private
17	Female	34	No	N/A	No	With nursing	Large	Not-for-profit
18	Male	35	Yes	RMN	Yes	With nursing	Medium	Small private

Appendix 4: Interview topic guide

Tell me about this care home.

What is your understanding of conflict (and conflict situations) within this setting?

Could you describe the sorts of (conflict) behaviours that you see in residents that may be related to their dementia?

How often do these conflict situations occur?

How do you think the environment/layout of the home helps or hinders residents with dementia?

How do you deal with conflict situations involving residents with dementia? How do you cope/survive? How effective are these strategies?

What factors affect how you deal with people with dementia?

What do you think would help staff in working with people with dementia?

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